

REMARKS

This Amendment and Response is believed to be fully responsive to the Office Action mailed December 12, 2005. In that Action: claim 41 was rejected under 35 U.S.C. § 112, first paragraph, as not enabled; claims 1, 4, 10, 13-15, 20, 21, 24-27, and 33-42 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Utsumi (USPN 5,729,281) in view of Bigham (USPN 5,740,075); claims 2 and 3 were rejected under § 103(a) as being unpatentable over the combination of Utsumi, Bigham, and Chen (USPN 5,699,105); claim 5 was rejected under § 103(a) as being unpatentable over the combination of Utsumi, Bigham, and Rakib (US Pat. Pub. No. 2002/0019984); claim 6 was rejected under § 103(a) as being unpatentable over the combination of Utsumi, Bigham, and Dunn (USPN 5,721,829); claim 7 was rejected under § 103(a) as being unpatentable over the combination of Utsumi, Bigham, and Fries (USPN 6,317,885); claims 8, 9, and 19 were rejected under § 103(a) as being unpatentable over the combination of Utsumi, Bigham, and Nikolich (US Pat. Pub. No. 2002/0073431); claim 11 was rejected under § 103(a) as being unpatentable over the combination of Utsumi, Bigham, and Ahmed (USPN 6,519,773); claim 12 was rejected under § 103(a) as being unpatentable over the combination of Utsumi, Bigham, and DeRodeff (USPN 5,828,403); claim 16 was rejected under § 103(a) as being unpatentable over the combination of Utsumi, Bigham, Chen, and an article in IEEE Communications Magazine; claims 17 and 18 were rejected under § 103(a) as being unpatentable over the combination of Utsumi, Bigham, and Kitamura (USPN 6,188,871); claim 22 was rejected under § 103(a) as being unpatentable over the combination of Utsumi, Bigham, and Wunderlich (USPN 5,631,693); claim 23 was rejected under § 103(a) as being unpatentable over the combination of Utsumi, Bigham, and McGowan (US Pat. Pub. No. 2003/0018745); claims 28, 29, and 31 were rejected under § 103(a) as being unpatentable over the combination of

Utsumi, Bigham, and Decker (USPN 6,009,465); claim 30 was rejected under §103(a) as being unpatentable over the combination of Utsumi, Bigham, Decker, and Shekel (USPN 3,639,840); and claim 32 was rejected under §103(a) as being unpatentable over the combination of Utsumi, Bigham, Decker, and Hoarty (USPN 5,220,420).

Claims 1, 33, and 40-42 have been amended. Claim 1, 33, 40, and 42 have been amended to even further distinguish over the prior art of record. Claim 41 has been amended to address the §112, first paragraph, rejection. Reconsideration of the rejected claims is hereby requested.

Claim 41 as amended has a limitation that the video channels are not de-modulated and then re-modulated at any point after being tuned/received/decoded at the headend and before being received at one of the plurality of interface units. The disclosure in the present patent application shows only frequency conversion from one carrier frequency to another carrier frequency occurring at a programmable converter 54 in the local service module (LSM) 24 (at page 20 and in Figure 3) in between the headend and the room interface units. Thus, this claim limitation is clearly supported and enabled by the specification, and the §112, first paragraph, rejection should be withdrawn.

Each of the independent claims (1, 26, 33, and 40-42) has been rejected based on a combination of Utsumi and Bigham. These references teach completely opposite approaches to cable distribution. Utsumi discloses a cable television system in which a channel selection signal is transmitted wirelessly from a subscriber device to a selective distribution station, so that the selective distribution station can select the selected channel from an all-channel signal that it receives from the center station. The selective distribution station then provides only the selected channel to the subscriber device. The selected channel is always provided at the same

predetermined frequency to the subscriber device. In addition, there is no communication of any other information down to the subscriber device. Thus, if a hacker can tap into the signal from the selective distribution station and transmit a channel selection signal, they can watch any channel they please.

Bigham appears to disclose an access subnetwork controller for video dial tone networks. The system includes a broadcast headend node that receives an OC-48 signal from a broadcast ring. Bigham sends all of the video channels down to the subscriber. Such an approach requires high bandwidth cabling all the way to the subscriber if a large number of video channels are to be made available to the subscriber. Furthermore, a hacker can easily tap into the signal going to the subscriber and watch any desired channel.

A person of skill in the art would never be motivated to attempt to combine the teachings of Utsumi and Bigham because they teach opposite approaches to distributing television content to subscribers. The only reason one would seek to combine the teachings of these two references would be through hindsight to improperly construct an argument of obviousness.

Furthermore, even if one were to attempt to combine these two references, they would not achieve anything that is operable. This is true for many reasons, but one of them has to do with the fact that the claimed cable distribution system includes both analog video channels and digital multiplex video channels. There is no provision in Utsumi for handling digital multiplex video channels. Further, there is no provision in Utsumi for providing information to any subscriber device of where to find a desired channel in a digital multiplex. Neither is there any provision in Bigham for providing information to any subscriber device of where to find a desired channel in a digital multiplex, nor is there any need to in Bigham as each channel is provided to the subscriber at the frequency where the subscriber already expects it. If one were

to modify Utsumi in accordance with certain teachings from Bigham, it would not address the issue of how to inform the subscriber device of where to find the desired video channel in a digital multiplex signal.

Utsumi at col. 10, lines 19-49, merely states that each selective distribution station (SDS) 10_i has a given frequency that it uses to transmit a video channel to the subscriber receiving device 32_i in a given subscriber device 72_i. This is done so that a single frequency division multiplexed signal can be sent to all of its subscriber devices 72. Each subscriber device 72_i has a given frequency assigned to it where it will look for the selected video channel. No information is sent from the SDS to the subscriber device relating to frequency locations or the location of a requested video channel within a digital multiplex signal. That is because the need for such was not anticipated by Utsumi. Of course, it was not anticipated by Bigham either.

Claim 26 is patentable because there is no motivation to combine the opposite teachings of Utsumi and Bigham and because combining them does not provide anything that would be operable.

Claim 1 is patentable for the reasons stated for claim 26, and because nowhere in the cited prior art does it teach or suggest the limitations added: wherein the headend makes determinations about the sharing of resources, multiplexing decisions, frequency planning, and associated frequency conversions based upon dynamic allocation of channels and bandwidth which is based upon channel selections made by users and wherein the frequency conversions are not based upon an industry standard frequency plan but instead are based upon a custom frequency plan so as to further minimize illegal tapping of video channels sent to the interface units.

Claim 33 is patentable for the reasons stated for claim 26, because the cited prior art does not teach or suggest certain following limitations, and because the only reason one would combine these limitations is based on impermissible hindsight: wherein each tuner/receiver/decoder tunes, receives, and decodes a given video channel and that channel from that tuner/receiver/decoder can be displayed on every video displaying apparatus associated with that headend; wherein the interface unit passes information back upstream via the cabling to its associated service module that includes channel selection information; wherein the local service module will only convert a selected video channel to the predetermined output frequency associated with a particular interface unit if that interface unit is authorized to receive that selected video channel; wherein the video channels have been spectrally inverted prior to passage to the interface unit; and wherein the interface unit spectrally inverts the received video channel to restore the original audio and video signal orientation before sending it to the video displaying apparatus.

Claim 40 is patentable for the reasons stated for claim 26, and because nowhere in the cited prior art does it teach or suggest the limitations added: wherein each of the plurality of interface units can send channel selection information via cabling to its respective service module so that the service module can use the channel selection information to determine which video channel to convert to the predetermined frequency.

Claim 41 is patentable because it requires that the video channels are not de-modulated and then re-modulated at any point after being tuned/received/decoded at the headend and before being received at one of the plurality of interface units. Of course, Utsumi clearly does de-modulate and then re-modulate at the SDS, which is between the headend (center station) and the interface unit (subscriber device), as shown in Figures 3 and 5.

Claim 42 is patentable for the reasons stated for claim 26, and because nowhere in the cited prior art does it teach or suggest the limitations added: wherein each service module communicates information to the interface units associated with the service module, the information including the location of the video channel within the digital multiplex in the case of the digital multiplex being sent to the interface unit.

In addition to the independent claims, the dependent claims are patentable for the additional limitations found therein. Particularly, claims 34-36 include the following limitation: if the headend is requested to arrange for the requested channel to be provided in the multiplexed channel signal, the headend then communicates to the particular service module associated with the customer the location of the requested channel in the multiplexed channel signal. These claims have been rejected based on the combination of Utsumi and Bigham, because Utsumi shows (at col. 10, lines 4-14 and 19-44) a frequency multiplexed signal between the SDS and the subscriber's device that has a designated frequency where each subscriber's device can expect its video channel. This cited passage has nothing to do with the headend then communicating to the particular service module associated with the customer the location of the requested channel in the multiplexed channel signal. First of all, the claimed limitation relates to the signals passed between the headend and the LSM, while Utsumi relates to signals passed between the SDS (potentially analogous to the LSM) and the subscriber's device. Second, Utsumi does not discuss communicating downstream the location of a channel in a multiplexed channel signal. For these additional reasons, claims 34-36 are not obvious in light of the combination of Utsumi and Bigham and the claims are patentable and should be allowed.

Based upon the foregoing, Applicants believe that all pending claims are in condition for allowance and such disposition is respectfully requested. So that this case can be disposed of

expeditiously, the Examiner is requested to telephone the undersigned to arrange for a telephone interview to occur the week when action will be required by the Examiner based on this

Amendment and Response.

Respectfully submitted,

MARSH FISCHMANN & BREYFOGLE LLP

By: /Robert G. Crouch/

Robert G. Crouch

Registration No. 34,806

3151 South Vaughn Way, Suite 411

Aurora, Colorado 80014

(720) 562-5506

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